

Serial No. 10/627,983
Docket No. T36-158111M/RS
(NGB.274)

3

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A scintillation counter including a scintillator comprising:
a Group III nitride compound semiconductor,
wherein said scintillator is excited by radiation.
2. (Currently amended) A scintillation counter ~~scintillator~~ according to claim 1,
wherein said Group III nitride compound semiconductor includes a layer structure.
3. (Currently amended) A scintillation counter ~~scintillator~~ according to claim 2,
wherein a layer of said Group III nitride compound semiconductor is formed on a
substrate.
4. (Currently amended) A scintillation counter ~~scintillator~~ according to claim 3,
wherein a buffer layer is formed between said substrate and said Group III nitride
compound semiconductor layer.
5. (Currently amended) A scintillation counter ~~scintillator~~ according to claim 2,
wherein said Group III nitride compound semiconductor layer includes a hetero structure.
- 6-10. (Canceled).
11. (Currently amended) A scintillation counter ~~scintillator~~ according to claim 1,
wherein said Group III nitride compound semiconductor comprises:

Serial No. 10/627,983
Docket No. T36-158111M/RS
(NGB.274)

4

a layer that emits fluorescent light when ~~irradiated~~ radiated by at least one of a CU-K α -ray source, an X-ray source, and a γ -ray source.

12. (Currently amended) A scintillation counter ~~scintillator~~ according to claim 1, wherein said Group III nitride compound semiconductor comprises:

a layered structure including a plurality of alternating GaN layers and InGaN layers.

13. (Currently amended) A scintillation counter according to claim 1, further comprising: 6, ~~wherein said scintillator counter comprises:~~

a radiation source that irradiates at least a portion of said scintillator; and
a light receiving unit that receives light emitted from said scintillator.

14. (Previously presented) A scintillation counter according to claim 13, wherein said radiation source includes at least one of a CU-K α -ray source, an X-ray source, and a γ -ray source.

15. (Previously presented) A scintillation counter according to claim 13, wherein said light receiving unit comprises:

a light amplifying and detecting unit.

16. (Previously presented) A scintillation counter according to claim 13, wherein said light receiving unit comprises:

a photomultiplier tube.

Serial No. 10/627,983
Docket No. T36-158111M/RS
(NGB.274)

5

17. (Currently amended) A scintillation counter according to claim 13, further comprising:

a ~~spectroscope~~ ~~spectrascop~~ disposed between said scintillator and said light receiving unit,

wherein said ~~spectroscope~~ ~~spectrascop~~ prevents light of a predetermined wavelength from reaching the light receiving unit.